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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Numbering Resource Optimization	))))	CC Docket No. 99-200

To: The Commission

COMMENTS OF NEXTEL COMMUNICATIONS, INC.

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SUMMARY

The explosion of competition in telecommunications coupled with an antiquated, monopoly-era framework for administration of telephone number resources is causing premature area code exhaust in many areas of the country and the possibility of North American Numbering Plan ("NANP") exhaust within the next decade. In this proceeding, the Federal Communications Commission ("Commission" or "FCC") has proposed a number of remedial actions to reform the telephone number assignment process to operate efficiently in the contemporary competitive telecommunications marketplace and to forestall NANP exhaust. This is essential because there is no real telephone number shortage, but rather a mismatch of number assignments to carriers and number demand from end users.

The uniform implementation of mandatory thousands-block number pooling — including both future assignments and unused thousands-block recovery — initially for wireline carriers only and, after November 24, 2002, for wireless carriers, coupled with stringent fill rate requirements and improved number assignment, audit and enforcement requirements, will correct these problems and postpone projected NANP exhaust well into the next century. Accordingly, the Commission must act decisively to institute a more efficient, uniform and competitively-neutral number assignment and reclamation system to alleviate number exhaust proceedings and extend the projected life of the NANP.

As a fast growing nationwide wireless carrier, Nextel is particularly concerned that telephone numbers be available for its customers on a timely basis. Uniformity of number administration across state boundaries is also especially important to Nextel and other wireless carriers, whose operations span political boundaries. As the Commission is aware, state-by-state number administration measures have spawned a patchwork of inconsistent proposals that may have anti-competitive impacts on wireless carriers using different technologies and networks. Delegating additional numbering authority to the states would greatly exacerbate this problem,

creating inefficiencies that would place wireless carriers at a competitive disadvantage not only to landline carriers, but — depending on the particular requirement — to other wireless carriers as well. Accordingly, the Commission's goal of encouraging competition requires that it exercise its plenary jurisdiction over telephone number administration in the United States.

Using their existing jurisdiction over landline local calling, state commissions should play a significant role in numbering optimization by ordering rate center consolidation — particularly in areas experiencing numerous area code exhausts. The linking of rate centers to landline call rating is a root cause of premature number exhaust. New wireline entrants must request an NXX code for each rate center in their service area to offer a local calling scope comparable to that of the incumbent LEC. Even wireless carriers, who typically have much larger local calling areas, are forced to request codes in multiple rate centers due to consumer desire to maximize the number of non-toll incoming calls from landline subscribers. States should be encouraged to implement rate center consolidations. In addition, the Commission should clarify that under its "Calling Party Pays" framework, landline-to-wireless calls are jurisdictionally CMRS and are not subject to landline rate center measurements. These steps would compliment other necessary number conservation actions.

A second major cause of premature number exhaust is the assignment of NXX codes in ten thousand number blocks regardless of actual subscribership or reasonable demand projections. This practice multiplies exponentially the inefficiencies created by the use of rate centers. The advent of the technology underlying local number portability ("LNP"), however, makes thousands-block number pooling practical for areas and carriers that have LNP implemented. This enables carriers to be assigned numbers in thousands-blocks as warranted by subscribership — thereby more efficiently linking number use and demand. It would also permit recovery and reassignment of unused or predominantly unused thousands-blocks. Thousands-block pooling, which is easier to implement and more cost effective that individual number

pooling or unassigned number porting, should be mandatory in major markets and in areas in jeopardy of code exhaust, although pooling should only apply to carriers that have already implemented LNP.

Because wireless LNP implementation has been delayed due to technical complexities, wireless participation in number pooling must be delayed accordingly. However, assuming improvements in the timeliness of code assignments, wireless carriers can contribute to number conservation through a requirement that they demonstrate higher fill rates before receiving new growth codes. Nextel agrees with the NPRM's suggestion that growth code assignments should be made on an objective showing based on utilization rates — calculated pursuant to a standard definition.

In addition to implementing thousands-block number pooling, the Commission should improve number usage data collection and strengthen the numbering administrator's ability to undertake usage audits and enforcement measures. Nextel supports most of the North American Numbering Council's recommendations on appropriate revisions to the Central Office Code Utilization Surveys (the "COCUS"). The Commission should amend its rules to require all carriers to file the survey on a regular basis with the North American Numbering Plan Administrator ("NANPA") in accordance with the time frames proposed herein. As the centralized data collection entity, the NANPA can disseminate numbering data to the states for code relief proceedings, so long as procedures ensuring the confidentiality of proprietary data are adequate. Nextel also supports empowering NANPA to perform random and "for cause" audits and to withhold additional codes as a sanction for carrier non-compliance. To ensure nationally consistent policies and procedures, audit and enforcement functions should not be delegated to state commissions.

Finally, Nextel supports the mandatory implementation of local ten-digit dialing which would reduce consumer confusion and free "protected" codes for assignment. Nextel opposes

any Commission endorsement of service-specific area code overlays because they are disruptive to customers, have anti-competitive effects, and are not an efficient number conservation measure.

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COMMENTS OF NEXTEL COMMUNICATIONS, INC.

Nextel Communications, Inc. ("Nextel" or the "Company"), by its attorneys, hereby submits its comments in the above-referenced proceeding.[1] In the Notice of Proposed Rulemaking ("NPRM"), the Federal Communications Commission (the "Commission" or "FCC") seeks comment on a wide variety of measures that may be useful in slowing the accelerating rate of number exhaust and prolonging the life of the North American Numbering Plan ("NANP").

I. INTRODUCTION

Nextel is the nation's largest provider of digital Specialized Mobile Radio ("SMR") services, offering a unique combination of two-way digital mobile telephone, text messaging, alpha-numeric paging and one-to-one and fleet dispatch services (Direct Connect™) using a single integrated handset. Nextel currently serves over 3.5 million digital mobile units throughout the U.S., including approximately 440,000 units added in the second quarter of 1999 alone, resulting in a twelve month subscriber growth rate of 76%. With such extraordinary subscriber growth, Nextel has a particular interest in assuring predictable and timely access to numbering resources nationwide for its customers.

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[1] In the Matter of Numbering Resource Optimization, *Notice of Proposed Rulemaking*, CC Docket No. 99-200, RM No. 9258, NSD File No. L-99-17, NSD File No. L-99-36 (rel. June 2, 1999) ("NPRM").

Nextel's credentials as a carrier knowledgeable on telephone numbering issues are a matter of public record. Nextel has participated in virtually all of the Commission's significant numbering debates beginning with the 500 Service Access Code assignment proceeding.[2] The Company's "front line" experience makes it well-suited to serve as a charter voting member of the North American Numbering Council ("NANC"), representing the interests of SMR and new entrant wireless service providers. Of particular relevance to this proceeding, Nextel has been an active participant in the NANC's Number Resource Optimization Working Group, which prepared a detailed number optimization report submitted to the Common Carrier Bureau in October 1998 and continues to work on developing recommendations for more efficient number use and administration.[3]

In addition, Nextel has participated in 14 state numbering conservation, inquiry and/or exhaust proceedings. Nextel consistently has advocated responsible and consistent number administration and conservation measures, and timely implementation of number exhaust relief. For example, Nextel was extensively involved in developing voluntary thousands-block conservation procedures in Massachusetts in anticipation of future thousands-block number pooling; these conservation standards and procedures have been adopted in at least two other states. Nextel was also one of the petitioners in the Request for Declaratory Ruling concerning number exhaust relief in the 215/610 area codes that resulted in the "Pennsylvania Order" in

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[2] *See* "Commission Requests Comment on Proposed Assignment of the 500 Service Access Code for Personal Communications Services," *Public Notice*, Mimeo 34306 (rel. Aug. 5, 1993).

[3] *See* Number Resource Optimization Working Group, "Modified Report to the North American Numbering Council on Number Optimization Methods," Oct. 20, 1998 ("NANC Report"). *See also* Nextel's Comments on the Report, Dec. 21, 1998.

which the Commission reiterated its commitment to consistent national telephone number administrative practices and policies.[4]

Although accelerating number exhaust is a serious problem that requires immediate Commission attention, it is also evidence — consistent with the goals of Congress and the Commission — that consumers are rapidly embracing a wide variety of new and innovative telecommunications services and applications and that new competition is expanding throughout telecommunications markets. The broadband CMRS industry, for example, has moved from only two facilities-based providers in a market to as many as eight facilities-based competitors in the larger markets.[5] On the wireline side, the number of competitive local exchange carriers is even greater, particularly in the largest metropolitan areas. Each of these new carriers requires number allocations before they can offer service, resulting in exponential growth in the demand for numbers compared to the days of the Bell System monopoly for which the current NANP assignment process was developed.

Even with this explosive growth in competitors, however, the current NANP should be serviceable well into the 21st century. The crux of the current problem is not an inadequate quantity of numbers in the NANP, but rather an inefficient and outmoded allocation system which results in huge inventories of "stranded" and unavailable numbers.[6] No single entity or

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[4] *See* Order of the Pennsylvania Public Utility Commission Regarding Area Codes 312, 610, 215 and 717, *Memorandum Opinion and Order on Reconsideration*, 13 FCC Rcd 19009 (1998) ("Pennsylvania Order").

[5] *See, e.g.,* Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Fourth Report,* FCC 99-136 (rel. June 24, 1999) at 6 (stating that each of the 35 largest BTAs have at least five providers of mobile telephony services).

[6] Theoretically, the 10-digit NANP could accommodate up to 9,999,999,999 telephone numbers. When divided by North America's estimated population of 303,775,220, this represents over 32 telephone numbers available for assignment to each man, woman and child.

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segment of the industry is "at fault" for the current situation. The NANP and its administration was developed during the Bell System monopoly era and was not designed to accommodate the plethora of providers and services that are now available. Two key features of the legacy public switched telephone network ("PSTN") are at the root of the problem: (1) the assignment of telephone numbers in ten thousand number blocks (full NXX codes) to carriers for subsequent assignment to their customers and (2) the use of geographic rate centers established by incumbent local exchange carriers ("ILECs") in coordination with state public utility commissions ("PUCs") for call rating purposes. As discussed in more detail herein, the numbering inefficiencies resulting therefrom can be effectively corrected through implementing thousands-block number pooling and rate center consolidation.

As a concerned industry participant, Nextel is encouraged by the Commission's galvanized attention to telephone numbering resource optimization. The Commission's key objective must be to institute a revised uniform national number assignment and reclamation system that uses the NANP's existing numbering resources more efficiently. Current cost estimates for expanding the NANP are staggering, though it is impossible to calculate the full impact on the telecommunications industry and the ramifications for the national economy and the general public.[7] Nextel therefore urges the Commission to act expeditiously in adopting competitively-neutral conservation and number reclamation measures, as outlined herein, to ensure the continued availability of numbers to all carriers and consumers.

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See U.S. Bureau of the Census, International Data Base, "Total Midyear Population," (visited July 29, 1999) <http://www.census.gov/cgi-bin/ipc/idbagg>.

[7] It is far preferable to take common sense steps now to extend the life of the NANP, rather than investing substantial time and effort to recreate an expanded NANP with additional digits.

II. THE PUBLIC INTEREST REQUIRES A COMPETITIVELY NEUTRAL UNIFORM FEDERAL NUMBER ADMINISTRATION POLICY

If there is a single thing that the increasingly frequent skirmishes between different classes of service providers and state commissions in area code exhaust proceedings highlight, it is the need for nationwide uniform numbering administration. State commissions have a substantial and legitimate role in number exhaust resolution; however, no single state is in a position to unilaterally "fix" the number crunch. Congress assigned exclusive jurisdiction to the Commission over numbering matters.[8] Out of this plenary jurisdiction, the Commission has delegated to the states only the authority to implement area code relief.[9] In addition, the states have jurisdiction over landline local calling issues, giving them a critical role in developing effective solutions to the problems posed by the legacy PSTN, as explained below.

Nevertheless, the Commission correctly has recognized the importance of uniformity in numbering administration. In 1996, the Commission declared that "a nationwide, uniform system of numbering . . . is essential to efficient delivery of telecommunication services in the United States."[10] More recently, the Commission reaffirmed this policy, stating that "[i]f each state commission were to implement its own NXX code administration measures without any uniformity or standards, it would hamper the NANPA's efforts to carry out its duties as the centralized NXX code administrator."[11]

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[8] *See* 47 U.S.C. § 251(e)(1).

[9] *See* Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, *Second Report and Order,* 11 FCC Rcd 19392, 19512 (1996) ("Local Competition Second Report and Order"); Pennsylvania Order, 13 FCC Rcd at 19031 (reiterating the limitation on states' authority).

[10] Local Competition Second Report and Order, 11 FCC Rcd at 19533.

[11] Pennsylvania Order, 13 FCC Rcd at 19023. Nextel has opposed the series of state PUC petitions for additional delegated authority to adopt state-specific number conservation and assignment requirements. *See e.g.,* "Common Carrier Bureau Seeks Comments on New York

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Uniformity of number administration is especially critical for wireless service providers whose operations span political boundaries.[12] If states are given any broader authority than they have presently to order numbering conservation measures one state could, for example, require individual number pooling while an adjoining state could require thousands-block pooling. One state might require 90 percent fill of a thousands-block before a carrier would be permitted to open a new thousands-block, while another state requires 65 percent fill. Worse, one state might require a months-to-exhaust standard for obtaining a growth NXX code, while another uses the fill rate approach. Such inconsistencies would create an entirely unworkable result. Regional and nationwide wireless networks are comprised of multiple mobile switches which, due to the inherent mobility of wireless subscribers and the desire to maintain seamless roaming, would have to be programmed to account for divergent state numbering requirements. Compliance with different number optimization mandates on a state-by-state basis within a wireless carrier's multi-state service area at the very least would present substantial technical complications and administrative complexity, resulting in significant financial ramifications. Moreover, inconsistent state mandates will competitively disadvantage wireless service providers vis-a-vis wireline service providers, who are state certified and are typically organized on a state-by-state basis.

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Department of Public Service Petition for Authority to Implement Number Conservation Measures," *Public Notice*, DA 99-426, NSD File No. L-99-21 (rel. Mar. 5, 1999), and similar notices for other states.

[12] Congress has recognized the interstate nature of CMRS by exempting it from state rate and entry regulation. *See* 47 U.S.C. § 332(c)(3). *See also,* Calling Party Pays Service Offering, *Declaratory Ruling and Notice of Proposed Rulemaking,* WT Docket No. 97-207, FCC 99-137 (rel. July 7, 1999) ("Calling Party Pays Declaratory Ruling") (reiterating the Commission's mandate to "establish a federal regulatory framework to govern the offering of all CMRS").

A patchwork of inconsistent state-by-state conservation measures could also competitively advantage one wireless carrier over another, depending on the technical configuration of each carrier's system. Unlike wireline networks which operate according to nationally consistent standards developed by Bellcore or industry fora, wireless networks, by design, operate using widely divergent technologies, air interfaces and internal operating systems. Indeed, it was the Commission's express policy in reserving spectrum for the new category of personal communications services ("PCS"), to spur the development of innovative, divergent wireless technologies to expand the communications options available to consumers.[13] As a result, the U.S. wireless industry includes operators using different and incompatible technologies, *e.g.*, CDMA, TDMA, GSM, and iDEN™, as well as traditional analog cellular technologies. However well-intentioned the effort, state regulatory proceedings are not an efficient process to identify and accommodate the constraints that may make a wireline conservation measure inappropriate for wireless carriers, or for some wireless carriers vis-a-vis others.[14] Consequently, state-by-state number optimization micro-management, or state attempts to impose "one size fits all" regulation on both wireline and wireless carriers, would be counterproductive to achieving the goals of this proceeding and to promoting competition. The Commission need only consider the intractable issues presented by implementing state-by-state E-911 cost recovery standards for the wireless industry to understand Nextel's concern.[15]

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[13] *See, e.g.,* Amendment of the Commission's Rules to Establish New Personal Communications Services, *Notices of Proposed Rulemaking and Tentative Decision,* 7 FCC Rcd 5676, 5676-77 (1992).

[14] The resources involved in participating in state exhaust proceedings are not insubstantial. Most states rely upon full-blown evidentiary hearings and the development of trial-type records for each instance of code exhaust.

[15] E911 implementation, for example, has not occurred ubiquitously throughout the Nation pursuant to the Commission's scheduled deadlines due, in part, to the vastly differing time and effort required for various states to put cost recovery mechanisms in place, *e.g.*, passage by state legislature, signature by the governor, and/or adoption by the citizens of the state pursuant to a statewide ballot initiative. Compounding the delays — particularly for larger

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Similarly, the Commission's initial determination to require CMRS carriers to offer Local Number Portability ("LNP") well in advance of any developed technical standard to accomplish this function highlights the added challenge inherent in adapting wireless networks to perform a particular function using a common standard.[16] While conforming with one nationally-applied standard will be challenging enough, complying with up to 50 different state number conservation measures would create inefficiencies that would seriously impact the competitiveness of the wireless industry and undercut the ability of wireless carriers to create and maintain efficient national networks.

Based on its extensive experience in over fourteen state area code proceedings, Nextel emphasizes the critical importance of uniform national standards for number pooling and other number conversation mechanisms and the potential competitive disparity of inconsistent code conservation measures on wireless networks. As the Commission already has recognized in its rules, number administration must not unduly favor any one telecommunications industry segment, group of consumers, or technology over another.[17] National consistency in policy and application is needed to avoid competitive disadvantage to wireless services.[18] The FCC can achieve the goal of uniformity best by maintaining its authority over NANP administration and

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multi-state carriers — is the fact that states do not agree on what are or are not reasonable recoverable costs for a wireless carrier. Additionally, states have attempted to impose their own varying technical requirements on carriers. Each of these has added to the delays in E911 implementation.

[16] *See* Telephone Number Portability, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8352, 8439-42 (1996).

[17] *See* 47 C.F.R. § 52.9(a).

[18] As an initial step toward formulating a uniform national policy, Nextel supports the Commission's proposal in the NPRM that it adopt rules defining basic terms so that all interested parties can have a "common language" when dealing with numbering issues.

abstaining from additional delegations of numbering authority to the states.[19] Moreover, because state numbering resource mandates could act as barriers to entry and affect carriers' competitiveness, any additional delegations would undercut the purposes behind Congress's decision in the 1993 Balanced Budget Act to preempt state entry regulation of wireless carriers,[20] and its proscription, in Section 253(a) of the Telecommunications Act of 1996, of state and local regulations that "have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."[21]

III. CARRIERS NEED TIMELY ACCESS TO INITIAL AND GROWTH CODE ASSIGNMENTS

Nextel recognizes the Commission's concern that some entrants may be requesting initial code assignments well in advance of when they will be able to commence service, which can result in inefficient distribution of number resources. The motivation for early code assignment requests can be easily explained by the currently unpredictable and sometimes very lengthy time-lags between the carrier's request date and the available activation date of the codes.[22] Because

[19] Nextel has not, however, opposed the use of state-initiated conservation measure trials—pending the outcome of this proceeding—such as thousands-block pooling, as long as: (1) such trials apply only to LNP-capable providers, (2) ten thousand number blocks remain available for non-LNP-capable carriers, and (3) an area code relief plan is in place in the event the trials are not adequate to address the number exhaust.

[20] *See* 47 U.S.C. § 332(c)(3)(A).

[21] *See* 47 U.S.C. § 253(a) and (d).

[22] Whether relating to requests for initial or for growth codes, a carrier's "hoarding" impulse is directly impacted by the length of time and degree of uncertainty involved in the code allocation process. Currently there is a forty-five day process from the time a block of numbers is assigned to a carrier until the Local Exchange Routing Guide ("LERG") is updated and the numbers can be assigned to customers and placed in use. This may not be the only relevant delay, however, as the carrier may be requesting numbers from a code in jeopardy. The point is that the fill rate for requesting growth codes must leave the carrier with sufficient numbers to assign to subscribers during the period beginning with the carrier's request until NANPA assignment of the numbers to the carrier and the LERG update. Thus, prompt NANPA action on growth code requests should reduce hoarding behavior.

timely access to initial codes is obviously critical to a carrier's ability to commence operations in a new geographic area, the showing required for code assignment should be less stringent than that required for obtaining growth codes.[23] The simplest showing that would ameliorate premature initial code applications would be to require applicants to certify that they will initiate service within 90 days of initial code activation, *i.e.*, the code is assigned to the carrier and incorporated into the LERG so that calls using the number will be completed throughout the PSTN. Failure to meet this deadline would result in code recovery.

Moreover, any rules developed on this point should reflect that wireless carriers do not require state certifications, and should recognize the various licensing regimes currently in effect for wireless carriers. For example, wireless providers may be licensed by Major Trading Areas, Basic Trading Areas, MSAs, RSAs, Economic Areas or even on a site-by-site basis.[24] Consequently, it should be sufficient for a wireless carrier to provide a representative license for an area to obtain initial codes.

Nextel supports the Commission's tentative conclusion to require an objective showing of need prior to the assignment of growth codes. As with other conservation measures, growth code fill rates should be established on a nationally-consistent basis, not by each individual state. Specifically, Nextel supports CTIA's suggestion of fill rate demonstrations of 60% in 1999, 65% in 2000 and 70% in 2001.[25] Nationally established fill rates need not, however, preclude the NPRM's logical suggestion to set fill rates higher for major markets and jeopardy areas than for

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[23] The inefficiencies created by "premature" code assignments, while presently significant, will be diminished considerably if thousands-block number pooling is implemented as suggested herein.

[24] Nextel subsidiaries, for example, operate under both Economic Area licenses and site-specific licenses.

[25] *See* NPRM at ¶ 63, n. 97.

non-jeopardy areas. Additionally, the fill rate for requesting growth codes must leave the carrier with sufficient numbers to assign to subscribers during the period beginning with the carrier's request until NANPA assignment of the numbers to the carrier and LERG update. Thus, prompt NANPA action on growth code requests should reduce any carrier incentive for hoarding.

The Commission suggests and Nextel agrees that there is value in adopting a uniform method for calculating fill levels. As a rapidly growing carrier, Nextel agrees that newly-activated codes, which typically have lower fill rates than more mature codes, be excluded from all utilization calculations for a reasonable period, such as 120 days. Newly activated codes should be excluded both from the numerator and denominator of any fill equation. Nextel also supports the NPRM's suggestion that a graduated fill threshold be applied to carriers with a minimal presence in a particular NPA.[26] Applying the same fill threshold, regardless of carrier circumstances, could create real hardship for the carrier with minimal presence in a particular NPA, but substantial adjacent operations.

The selection of either the NPA or the rate center as the appropriate area for the utilization rate calculation may have significant impact on a carrier's ability to timely obtain growth codes to serve customers. The FCC should resolve this issue in a way that does not deprive carriers of timely access to numbers. While NPA-based calculations might better reflect how wireless service typically is offered, the NPRM correctly notes that the averaging effect of using NPAs could create shortages in urban rate centers located in an NPA that also contains rural rate centers with lower utilization rates.

Nextel's concern over timely access to growth codes is informed by its experience in Pennsylvania. Just last year Nextel was placed at a distinct competitive disadvantage when it

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[26] *See* NPRM at ¶ 68.

was unable to timely obtain any growth codes to meet new subscriber demand in the Philadelphia area. This resulted from the Pennsylvania PUC's failure to implement workable area code relief that conformed to Commission guidelines prior to code exhaust in the 215/610 NPAs. Nextel was forced to implement costly and time-consuming remedies, including seeking a declaratory ruling from the FCC to obtain numbers to assign to new subscribers.[27] Any Commission rules governing the assignment of growth codes should be geared to avoiding these situations in the future.

As the NPRM observes, the development of uniform calculation standards will help to minimize the potential for number stockpiling. Nextel also suggests that the NANPA, or any other neutral entity charged with enforcement, target for more frequent or intensive audit those number status categories that are most susceptible to stockpiling, such as reserved numbers and numbers allocated to resellers.

IV. THE FCC SHOULD ENCOURAGE STATES TO CONSOLIDATE RATE CENTERS OR EXPAND LOCAL CALLING AREAS

The rating of existing LEC and CLEC calls using rate centers and the allocation of codes in full ten thousand number blocks are the two factors most responsible for the inability of the NANP to accommodate the telecommunications industry's current rapid growth. Rate centers are geographic areas originally created by ILECs as a means to measure the approximate distance a call travels for the purpose of determining whether the call is rated and charged as a toll or a local call. Typically, one central office switch is associated with each ILEC rate center. Under the legacy architecture of the PSTN, each NXX code is assigned to a single switch. Prior to the advent of Location Routing Number ("LRN") technology therefore,[28] NXX codes *had* to

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[27] *See* Pennsylvania Order 13 FCC Rcd at 19037, n. 123.

[28] *See* Section V, *infra.*

be assigned in their full complement of ten thousand numbers to permit the proper routing of calls to the terminating switch.

For a new entrant CLEC, maintaining a "presence" in each rate center is not necessary for their own network operations or other technical reasons, but it is necessary for competitive reasons. To offer non-toll local calling areas comparable to what the ILEC offers, each CLEC must request a separate NXX code for each rate center. Given this framework, the expansion of local competition, a prime Commission goal, necessarily results in vast quantities of stranded number inventories. A typical metropolitan area may have 50 or more rate centers. Because NXX codes are issued in blocks of ten thousand telephone numbers, one new entrant CLEC would require approximately a half million numbers to offer non-toll local calling areas comparable to the ILEC — regardless of the number of customers the CLEC has signed up or projects in its business plan. Assuming that many major markets have more than ten CLECs, over five million additional numbers are required for wireline competition in that single market alone, regardless of the number of actual CLEC customers. Tremendous inefficiencies result because a new entrant CLEC may have only a handful of customers in most of the rate centers; the CLEC may take years to build up its customers base, thus leaving hundreds of thousands of telephone numbers stranded and contributing to number exhaust. In fact, with an average fill rate for NXX codes assigned to CLECs of five percent, the average CLEC is holding 9,500 unused telephone numbers *per rate center.*[29]

Wireless carriers do not determine their local calling areas according to ILEC rate center boundaries. However, the antiquated rate center structure still affects wireless carriers' needs for

[29] This is not intended as an indictment of CLEC number request practices; it merely reflects the problem of overlaying competitive networks on a legacy monopoly process. The solution is not to punish competitors, but to modify the NXX assignment process, as discussed herein.

additional codes because subscribers — particularly business subscribers who make up the bulk of Nextel's customers — want as many landline callers as possible to be able to reach them without incurring a toll charge. For example, if one wireless carrier can offer prospective subscribers a number assigned from a rate center that results in most landline-originating calls being rated as local, but a competing carrier has no number to assign from that same rate center, the latter carrier will be at a competitive disadvantage. Like CLECs therefore, competitive factors require that wireless carriers obtain NXXs in as many rate centers as necessary to provide the person calling the wireless subscriber with local calling.

The Commission has properly recognized that rate center consolidation can yield significant number distribution efficiency gains and is "a vitally important long-term measure to optimize the utilization of numbering resources."[30] By reducing the total number of rate centers, both wireline and wireless carriers will require fewer NXX codes to provide the same level of competitive service. Because rate center designations affect local calling rates, rate center consolidation falls within the jurisdiction of the state PUCs. The Commission should continue to inform states of the substantial benefits of ordering rate center consolidations and should strongly encourage them to begin the consolidation process expeditiously. States ordering rate center consolidation may be able to forestall the often costly and politically heated implementation of area code relief.

Likewise, the Commission should encourage state PUCs to consider the expansion of local calling areas which will have an effect similar to rate center consolidation.[31] Expanded

[30] NPRM at ¶ 116.

[31] Expanded local calling areas differ from *extended* local calling areas ("ELCA") analyzed in the NANC Report. ELCAs are technical arrangements that permit wireline callers throughout a large geographic area—typically a LATA—to place calls to CMRS users in the same calling area without incurring a toll charge. However, the CMRS provider usually pays the wireline carrier a per minute charge for these calls, which may be passed on to the wireless subscriber.

local calling areas lessen the need for CLECs to seek NXX code assignments in each rate center, as the rate center becomes a less significant determinant of call rating. Whatever methods a particular state prefers to deal with this issue, the important point for the Commission is to encourage the decoupling of call routing from call rating.

As the Commission appears to have recognized in its recent Declaratory Ruling, landline-originating calls to wireless subscribers may stand on a different footing than traditional landline to landline calls.[32] Because these calls are considered CMRS service, there is no technical or conceptual rationale for the originating landline carrier to rate such calls using a landline rate center basis. Inbound calls to wireless subscribers are routed to the wireless provider's switch, which likely is not physically located in the same rate center as the subscriber's telephone number. Due to the mobile nature of wireless service, the wireless subscriber also may be physically located in another rate center.[33] There is no logical connection between the call's origination and termination points and the landline rate applied. This underscores the point that because wireless networks are not set up like landline networks, the application of ILEC networking and call rating legacies result in perverse outcomes for number conservation as well as for advancing local competition. It would substantially assist number conservation efforts if the Commission were to clarify its Calling Party Pays Declaratory Ruling to include a statement prohibiting ILECs from using landline rate centers for calculating their charges to wireline subscribers calling a wireless subscriber.

While Nextel agrees as a general matter that rate center consolidation falls within the jurisdiction of state PUCs, the jurisdiction of incoming landline calls to wireless subscribers is

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[32] *See* Calling Party Pays Declaratory Ruling at ¶ 15.

[33] In fact, the subscriber may request a wireless number in a different rate center than the one covering the subscriber's billing address, if it would allow a greater number of non-toll incoming calls.

less well settled. In the Calling Party Pays proceeding, the Commission determined that such calls are CMRS and jurisdictionally under federal control. Following the same logic, the Commission should exert its jurisdiction over CMRS calls to de-link inbound landline-originating calls from the rate center pricing scheme. Such action would reduce the need of wireless carriers to obtain NXX codes in multiple rate centers solely to provide competitive local calling areas for wireline callers to their wireless subscribers. This would further conserve numbering resources.

V. CERTAIN NUMBER POOLING SOLUTIONS HAVE SERIOUS NEUTRALITY IMPLICATIONS

Numbers are currently assigned to requesting carriers in blocks of ten thousand, and all numbers in a particular NXX are routed to a single switch. To provide service to just one customer in a particular rate center, a new entrant has no option but to request a full ten thousand number block. The advent of Location Routing Number ("LRN") architecture, however, allows telephone numbers with the same NXX code to be routed for termination to different switches operated by different carriers. The NANC and the industry have adopted LRN as the technology underlying Local Number Portability ("LNP").[34] Once LNP is implemented in a particular area, it is possible to assign numbers in smaller blocks because the NXX digits no longer necessarily indicate the switch or service provider associated with the number dialed. Thus, where wireline carriers have implemented LNP, LRN-based number pooling offers a way to assign numbers to carriers in proportion to their subscriber base and projected subscriber growth in a given rate center. It also offers a more granular way to assign growth codes as subscribership increases, and to recover previously assigned but unused or minimally-contaminated thousands-blocks for reassignment.

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[34] *See* Telephone Number Portability, *Second Report and Order,* 12 FCC Rcd 12281, 12287 (1997).

The Commission required wireline carriers in the largest 100 MSAs to implement LNP by December 31, 1998 in switches that another carrier has requested be made LNP capable.[35] Outside the top 100 MSAs, wireline carriers must implement LNP within six months after receiving a request. Recognizing the complexities and unresolved technical challenges of implementing LNP for wireless networks on a similar schedule, the Commission deferred any requirement for wireless LNP until November 24, 2002.[36] Thus, while pooling can be implemented by wireline carriers in most large markets, wireless carriers will not be able to participate in number pooling until after November 24, 2002.

The NPRM presents several number pooling options for consideration as mandatory changes to current numbering administration: thousands-block pooling, individual telephone number ("ITN") pooling, and unassigned number porting ("UNP"). Nextel believes thousands-block pooling is the most effective solution because it can be implemented within a short period after the introduction of LRN-LNP and would have a substantial positive impact on number conservation. Thousands-block pooling relieves the 10,000 telephone number stranding problem discussed above. It would enable new entrant CLECs, for example, to receive only a single thousands-block in multiple rate centers, thereby reducing the inefficient stranding of telephone numbers in this way by up to 90 percent. Thousands-block number pooling offers a sufficiently granular method of matching subscriber demand for numbers with number inventory, as well as retrieving stranded numbers for reassignment, thereby minimizing the stranded number problem with the least adverse impact on carrier operations and lower cost than other pooling alternatives.

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[35] 47 C.F.R. § 52.23(b)(1).

[36] *See* Petition for Forbearance from CMRS Number Portability Obligations, *Memorandum Opinion and Order*, 14 FCC Rcd 3092, 3093 (1999) ("CMRS LNP Forbearance Order").

Nextel agrees with the conclusions in the NANC Report that ITN pooling is more costly and would take considerably longer to implement — at least four to six years — with only marginal gains in efficiency over thousands-block pooling. ITN would require a standards setting process, the creation of a new ITN pooling administrative function to manage individual pooled telephone numbers, the development of new vendor equipment, and the construction and deployment of untried technologies. Additionally, the system changes would impact existing switch technologies, thus imposing additional switching requirements not required with thousands-block number pooling.[37]

For the wireless industry, ITN would increase the cost of service activations due to the need for both internal and external interfaces at each point of sale location. To ensure that all interfaces are upgraded to interact with external systems would require significant development and modifications of existing systems.[38] Accordingly, Nextel believes that the incremental benefit of being able to assign numbers in blocks smaller than one thousand is far outweighed by the additional costs involved. Thousands-block pooling, especially when implemented in conjunction with rate center consolidations, likely will be sufficient to significantly slow the frequency of NPA code exhausts and preserve the long-term viability of the NANP.

For reasons similar to its opposition to ITN, Nextel does not support UPN which would also be more costly and time-consuming to implement than thousands-block pooling. In the NANC Report, the use of UNP was considered as a potential stop-gap measure for conserving numbers after a code exhaust has occurred. UNP would allow access to a limited set of numbers (in other carriers' inventories) until code relief was implemented. UNP suffers from the same

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[37] *See* NANC Report at Section 4.6.8.

[38] *See* NANC Report at Section 4.6.5.

general deficiencies as ITN and should not be the Commission's main focus for ameliorating number exhaust. UNP becomes unnecessary if thousands-block pooling is implemented.

In addition to prospectively saving numbers through smaller initial allocations, pooling will permit the return of unused thousands-blocks previously issued to carriers. The return of unused thousands-blocks should be mandatory. Because most thousands-blocks have had at least a few numbers assigned from them, the blocks should be returned if they have usage or "contamination" rates below ten percent, as suggested in the NPRM.

Thousands-block number pooling should be mandatory in major markets and areas where NPAs are in jeopardy of exhaust. Logically, pooling should be mandatory only in areas where LNP already is implemented. At this point in time, it should not be necessary for the Commission to require wireline pooling in smaller, non-jeopardy markets where LNP is required to be implemented only if requested by another carrier. While this may create a slight mismatch in markets where LNP is not implemented and jeopardy is declared versus markets where LNP is in place, LNP is a prerequisite for any type of pooling mechanism. It is certainly preferable to take measures which can reasonably be taken to improve number conservation now, rather than await some future availability of nationwide, all carrier LNP.

Wireless carriers should also participate in number pooling beginning a reasonable period (at least six months) after wireless implementation of LNP. However, as the FCC has recognized, LRN-LNP is more technically complex and will take longer to implement for wireless carriers. Based on the evaluation of the NANP Exhaust Study, implementing thousands-block pooling for wireline carriers alone will preserve NANP viability well into the

next century.[39] Accordingly, there is no compelling public policy basis for requiring acceleration of the Commission's implementation schedule for wireless LNP.

Nextel recognizes that, until wireless carriers can implement LRN, wireline carriers will carry the heavier burden of contributing to pooling conservation measures. This is not unreasonable, in and of itself, however, given that CLEC NXX code fill rates average about five percent, compared to wireless carrier fill rates of nearly 40%.[40] Although ILECs have higher fill rates, it is the ILEC-designed rate center system which greatly exacerbates number exhaust.[41] Moreover, as noted above, implementing wireline pooling alone is estimated to postpone NANP exhaust by approximately 40 years, obviating the immediate need for the more complex and costly wireless pooling.[42]

Nevertheless, until wireless pooling can be implemented, wireless carriers should contribute to the number resource optimization goals of this proceeding through enforcing the higher NXX fill rate requirement for new growth codes as discussed above. Rapid subscriber growth makes it easier for wireless carriers to achieve higher fill rates than landline — particularly CLEC — carriers. However, a critical corollary to establishing a more demanding fill rate for wireless carriers is that new NXX codes assignments must be made expeditiously. The rapid subscriber growth which makes higher fill rates possible also makes speed of

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[39] *See* Lockheed Martin CIS, "North American Numbering Plan Exhaust Study," Apr. 22, 1999 at 4-2, n. 2 ("NANP Exhaust Study").

[40] *Id.* at 3-11, 3-13.

[41] Additionally, the pooling burden may be less for ILECs in terms of the requirement to return unused codes because ILEC code inventories typically have higher contamination rates than those of other carriers.

[42] *See* NANP Exhaust Study at 4-2, n. 2.

assignment vitally important to a carrier's ability to satisfy demand in a rapidly growing wireless market.

VI. IMPROVED DATA COLLECTION, AUDITING AND ENFORCEMENT MEASURES

A. Carrier Data Surveys

To effectively manage numbering resources, NANPA needs accurate, timely and comprehensive information on number usage by carriers. The Commission should require all carriers to submit Central Office Code Utilization Surveys ("COCUS") to NANPA, as more complete data resources will significantly improve NANPA's exhaust forecasting and planning abilities. To ensure that this data is readily available to the numbering administrator, Nextel supports the proposal that additional codes be withheld from carriers that do not timely file their COCUS reports.[43]

Given the proprietary nature and competitive value of a carrier's number utilization data, it is critical that procedures are implemented to ensure the confidentiality of this data by all parties that have access to it in any form. As Nextel has discovered in the course of its extensive participation in state numbering conservation and exhaust proceedings, some states have no mechanism to safeguard proprietary information such as carrier specific number utilization data. Any COCUS information should be reported only to the neutral numbering administrator on a strictly confidential basis. States that have need for this information should be able to obtain it only on an aggregated basis. Only where it can be confirmed that states have sufficient confidentiality protection should individual data be released on a confidential basis to a state.

[43] Once the non-compliant carrier provides its reports, the numbering administrator could then assign growth codes.

Designation of the NANPA as the centralized numbering data collection entity will free carriers from the burden of responding to multiple state and federal reporting formats and requests. After consultation with the Commission, NANPA can establish guidelines for the dissemination of aggregate information that will permit all interested parties to plan for number exhaust. The Commission should codify this approach to data reporting in its rules, along with provisions pertaining to audits and enforcement measures.

In addition to requiring mandatory filing of the COCUS, the survey itself needs to be improved to solicit more useful data. Nextel supports the NANC's recommendations in its recent report on reform of the COCUS particularly as to the necessary data elements to be reported.[44] As to the required reporting intervals, however, Nextel believes that more frequent reporting should be required. Nextel suggests that carrier reports for NPAs that are in jeopardy of exhaust should be filed quarterly, with semi-annual reporting required for non-jeopardy areas.

B. Use Of Audits

The NANPA (or any other FCC-appointed neutral administrator) should be empowered to audit carrier filings and report any substantial and continuing carrier non-compliance problems to the FCC for appropriate action. Of the three possible audit methods suggested in the NPRM, Nextel believes that "random" and "for cause" audits provide NANPA and the FCC with sufficient tools to ensure reasonable use and compliance with numbering rules and guidelines. A routine audit would prove more costly than the other alternatives and would not significantly add to NANPA's enforcement and reclamation process. Adequate funding to perform audits should be included as part of NANPA's normal, overall funding process.

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[44] *See* "Recommendation of the North American Numbering Council Concerning the Replacement of the Central Office Code Utilization Survey," June 30, 1999. Nextel is commenting on the NANC COCUS recommendation here, rather than in a separate filing.

States certainly should take part in shaping appropriate audit processes. Nextel, however, does not support the delegation of any audit responsibilities to the states. As in other areas of numbering administration, auditing and enforcement should be undertaken at the national level, applying uniform policies. The neutral number administrator is in the best position to undertake audits and report any recurring problems to the Commission for appropriate action.

C. Enforcement

Nextel believes the NANPA — and only the NANPA — subject to FCC rules and policies, should be empowered to withhold NXX codes as a sanction for a carrier's failure to comply with the FCC's reporting or audit requirements. The assessment of other sanctions, including forfeitures, should be left to the FCC. To ensure nationally consistent and competitively neutral numbering administration, Nextel opposes delegation of any numbering enforcement authority to state PUCs. States may always provide the NANC and the FCC with any concerns they may have about potential carrier non-compliance and their interests are thus protected.

VII. OTHER PROPOSED CONSERVATION METHODS

A. Ten Digit Dialing

The implementation of local ten digit dialing in several states in area code relief situations demonstrates that telephone subscribers can be educated to understand that a ten digit call is not necessarily a toll call. Given the implementation of ten digit dialing in several significant states, the United States is no longer at the point where it can be assumed that all seven digit calls are local and all ten digit calls are not. Because mandatory ten-digit dialing would also assist in number conservation, the Commission should declare ten digits to be the standard dialing pattern for all domestic United States calling, whether local or long distance. Nextel concurs with the NANC Report's conclusion that mandatory ten-digit dialing would

reduce consumer confusion created by inconsistent dialing patterns existing from state-to-state.[45] It would also reduce disruptions caused by the imposition of NPA relief plans. Moreover, ten-digit dialing would also offer number conversation benefits by freeing unused "protected" numbers for assignment and use.

B. Area Code Relief

Until number conservation measures can be implemented on a large scale, area code relief will continue to be a frequent necessity. Too many states are failing to implement relief plans in a timely fashion, evidenced by the fact that even many newly-created NPAs are already in jeopardy status immediately upon their creation. Such last minute relief risks the same kind of disastrous results Nextel and other wireless carriers experienced in Pennsylvania and, as a policy matter, is unacceptable.

While relief should be implemented promptly where needed, Nextel also has concerns regarding the anti-competitive effects resulting from certain types of relief that have been considered by some state commissions during area code relief proceedings. Specifically, Nextel opposes service-specific overlays because they generally require the return of numbers already assigned to a carrier's customers. This disruptive process causes considerable inconvenience and expense and is not competitively neutral because it negatively impacts the customers of one class of service provider without affecting customers of other service providers. Moreover, service-specific overlays created to cover only a single existing NPA are not an efficient means of numbering resource distribution. Because the demand for landline service still outstrips the demand for wireless, an entire area code reserved for wireless carriers would provide *too many* numbers for wireless use, while failing to free up significant quantities of numbers in the old

[45] NANC Report at Section 10.5.1.

NPA. The mere fact that several states have diverted substantial time and resources to the examination of service-specific overlays, rather than to proceedings directed to permissible area code relief, highlights the need for Commission rules prohibiting service-specific overlays.

VIII. CONCLUSION

Nextel supports the Commission's efforts to forge a revised framework for the nation's numbering needs. While certain measures can and should be implemented now, others are impractical for wireless carriers and in geographic areas where local number portability and the LRN architecture supporting it have not been implemented. The Commission should immediately move to thousands-block number pooling for wireline carriers. Wireless carriers can also make a substantial immediate contribution to number conservation by the utilization of a higher fill rate requirement for access to growth codes, pending their ability to participate in number pooling after November 2002.

The Commission should use this proceeding to confirm the primacy of its rules and policies over conflicting state numbering rules and policies and articulate a uniform, national set of rules for number administration. This uniformity in numbering policy is critical for wireless carriers, who cannot operate their networks under the conditions of potential chaos that state-by-state numbering policy creates. The Commission should avoid delegating any authority to states that might compromise uniform national numbering administration.

State commissions should be encouraged to accelerate efforts to consolidate landline rate centers and expand local calling areas. This is the area where state involvement and action are

critical. The neutral numbering administrator, rather than the state commissions, should be the central repository of numbering reports and the entity with the ability to reclaim numbers, audit and sanction non-compliant carriers.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Vanese E. Hawkins, hereby certify that I sent a true and correct copy of the foregoing Comments of Nextel Communications, Inc. on this 30th day of July 1999, via hand to the following:

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